Applicant : JANG, Kyung-Hun et al.   Attorney's Docket No.: 12000-SMG-0022
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IN THE CLAIMS

1. (Currently Amended) A multicast data retransmission method, the method comprising the steps of:

(a) grouping wireless terminals based on distances between an access point and the wireless terminals and amplitudes of signals output from the wireless terminals;

(b) selecting from each group of wireless terminals a repeater wireless terminal to retransmit multicast packets to each wireless terminal in its from each group, and arranging the order in which the repeaters retransmit multicast packets to their groups;

(c) creating a multicast packet train header indicating characteristics of each of the multicast packets;

(d) multicasting each of the multicast packets including the created multicast packet train header to all the wireless terminals; and

(e) retransmitting by the repeater terminal in each group according to the arranged order the multicast packets in the order arranged in step (b) to each of the terminals in the group, irrespective of whether the wireless terminals in the group receive the multicast packets.

2. (Currently Amended) The multicast data retransmission method of claim 1, wherein step (b) selecting the repeater further comprises the step of selecting a wireless terminal from the group[,] which outputs a signal with the greatest amplitude[,] as the repeater from each group by determining a status of a channel of the wireless terminal based on the amplitude of signal output from the wireless terminal.

3. (Currently Amended) The multicast data retransmission method of claim 1, A multicast data retransmission method, the method comprising:

grouping wireless terminals based on distances between an access point and the wireless terminals and amplitudes of signals output from the wireless terminals;

selecting from each group of wireless terminals a repeater wireless terminal to retransmit

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multicast packets to each wireless terminal in its group, and arranging the order in which the repeaters retransmit multicast packets to their groups;

creating a multicast packet train header indicating characteristics of each of the multicast packets;

multicasting each of the multicast packets including the created multicast packet train header to all the wireless terminals; and

retransmitting by the repeater terminal in each group according to the arranged order the multicast packets to each of the terminals in the group, irrespective of whether the wireless terminals in the group receive the multicast packets. wherein the multicast packet train header comprises:

multicast train ID information which is used to identify a multicast packet train;

information about the number of groups of wireless terminals, the wireless terminals being connected to a wireless network and receiving the multicast packets;

information about the number of multicast packets in each group, the multicast packet being transmitted after the multicast packet train header is multicasted; and

forward error correction information which is used to correct an error of the multicast packet train header.

4. (Currently Amended) A multicast data retransmission method used in a system that retransmits multicast packets by using to a plurality of wireless terminal and terminals serviced by an access point, the multicast data retransmission method for a wireless terminal of the plurality of wireless terminals comprising the steps of:

(a) receiving from the access point information on including an indication of a group which the wireless terminal belongs to;

(b) if determining from the information whether the wireless terminal is selected as a repeater that is to retransmit the multicast packets[[,]]; and

receiving information from the access point about the order in which repeaters retransmit the multicast packets; and, (c) receiving a retransmission command from the access point, and retransmitting the multicast packets to other wireless terminals when it is determined the wireless terminal is selected as a repeater terminal, irrespective of whether the wireless terminals receive

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~~the multicast packets.~~

5. (Currently Amended) The multicast data retransmission method of claim 4, ~~wherein step (b)~~ further ~~comprises the step of, if the wireless terminal is not selected as the repeater,~~ comprising receiving the retransmitted multicast packets and discarding the retransmitted multicast packets if the multicast packets have already been received without a packet error when it is determined the wireless terminal is not selected as a repeater terminal.

6. (Currently Amended) A multicast data retransmission method, the method comprising ~~the steps of:~~

    ~~(a)~~ grouping wireless terminals based on distances between an access point and the wireless terminals and amplitudes of signals output from the wireless terminals; and

    ~~(b)~~ selecting a repeater from each group to retransmit multicast packets ~~from each~~ to its group ~~and retransmitting the multicast packets,~~ wherein ~~step (b) further comprises the steps of:~~ ~~(b1)~~ selecting a repeater includes selecting a wireless terminal in a group that ~~which~~ outputs a signal with the greatest amplitude as the repeater for the group by determining a status of a channel of the wireless terminal based on the amplitude of signal output from the wireless terminal[[;]] and ~~(b2)~~ determining the order in which the repeaters retransmit the multicast packets; and

    ~~(b3)~~ transmitting a retransmission command to the repeaters in the order in which the repeaters retransmit the multicast packets.

7. (Cancelled)

8. (Currently Amended) An apparatus for multicast data retransmission, the apparatus comprising:

    a grouping unit which groups wireless terminals based on distances between the wireless terminals and amplitudes of signals output from the wireless terminals;

    a repeater selecting and retransmission order arranging unit which selects ~~the~~ a repeater from each group to retransmit the multicast packets ~~from~~ to at least the wireless terminal in each

group, and arranges the order in which repeaters retransmit the multicast packets;

a multicast packet train header creating unit which creates a multicast packet train header before the multicast packets are multicasted;

a multicast packet train header transmitting unit which transmits the created multicast packet train header to all wireless terminals; and

a retransmitting unit which retransmits the multicast packets ~~in~~ according to the order arranged by the repeater selecting and retransmission order arranging unit, after the multicast packet train header transmitting unit multicasts the multicast packet train header.

9. (Original) The apparatus of claim 8, wherein the retransmitting unit transmits the retransmission command to a repeater, which is first to retransmit the multicast packet, and transmits the retransmission command to a repeater which is second to retransmit the multicast packet.

10. (Previously Presented) A computer readable recording medium readable by a machine, and being encoded with a multicast packet train header for executing a multicast data transmission, said header comprising:

multicast train ID information which is used to identify a multicast packet train;

information about the number of groups of wireless terminals, the wireless terminals being connected to a wireless network and receiving the multicast packets;

information about the number of multicast packets in each group which indicates the number of multicast packets in each group, the multicast packets being to be transmitted after the multicast packet train header is multicasted; and

forward error correction information which is used to correct an error of the multicast packet train header.

11. (Previously Presented) A computer readable recording medium readable by a machine, and being encoded with a computer program for executing the multicast data retransmission method of claim 1.

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12. (Previously Presented) A computer readable recording medium readable by a machine, and being encoded with a computer program for executing the multicast data retransmission method of claim 4.

13. (Previously Presented) A computer readable recording medium readable by a machine, and being encoded with a computer program for executing the multicast data retransmission method of claim 6.

14. (Cancelled)

15. (New) The method of claim 1 wherein receivers receiving the multicast packets without error discard the received retransmitted multicast packets.

16. (New) The method of claim 1 wherein the access point is selected as the repeater for one group.

17. (New) The method of claim 4 wherein the order in which repeaters retransmit the received multicast packet is arranged to prevent collisions of multicast packets during each repeater retransmission of the received multicast packet.

18. (New) The method of claim 6 wherein the access point is selected as the repeater for one group.

19. (New) The method of claim 6 wherein the order in which repeaters retransmit the received multicast packet is arranged to prevent collisions of multicast packets during each repeater retransmission of the received multicast packet.